Case Report

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Gestational intestinal obstruction complicated by cortical blindness – a multidisciplinary case report

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Lesson

Our case highlights the difficulty of diagnosing and managing surgical pathology during the advanced stages of pregnancy.

Keywords

pregnancy, intestinal obstruction, cortical blindness

Introduction

The diagnosis of a surgical problem in a pregnant patient is often hindered by several factors. The reluctance to obtain adequate imaging and a tendency to attribute any abdominal symptoms to the pregnancy itself may impact on prompt identification and treatment of surgical conditions. Our case not only illustrates some of those stumbling blocks but also shows how effective multidisciplinary care is essential for the resolution of a complex surgical and obstetric condition.

Presentation

A 31-year-old woman contacted her obstetric department at 32 + 6 weeks gestation complaining of sudden onset epigastric pain and vomiting. She had no co-morbidities and this was her first pregnancy. Her only surgical history was of an open appendicetomy performed 15 years earlier.

She was apyrexial. Urine testing showed a heavy ketonuria. The foetal examination was unremarkable. She was provisionally diagnosed with gastroenteritis and treated with intravenous (IV) hydration and monitoring. She continued to feel nauseous and continued to vomit despite antiemetic treatment. Blood tests showed a mild neutrophilia and her ketonuria failed to resolve. She was passing small amounts of flatus but not opening her bowels.

She developed fever along with bilateral flank pain after one day. Her white cell count was significantly elevated. Her urine dipstick was negative for nitrites and leukocytes, but IV antibiotics were commenced for presumed urinary tract infection. Ultrasound showed some mild gestational hydronephrosis. Her symptoms gradually improved, and she was able to eat and drink in small amounts and passed a small amount of stool with suppository use. She was discharged on day 8.

The patient represented two days later with epigastric pain, vomiting and constipation. Tests showed neutrophilia with an alanine aminotransferase (ALT) of 263 and bilirubin of 22. A gastroenterology review queried acute fatty liver of pregnancy (AFLP). Abdominal ultrasound did not show gross fatty changes but is known not to be diagnostic.[1] The patient was reviewed by the surgical team who indicated that no diagnosis was possible without further imaging but that obstruction should be excluded.

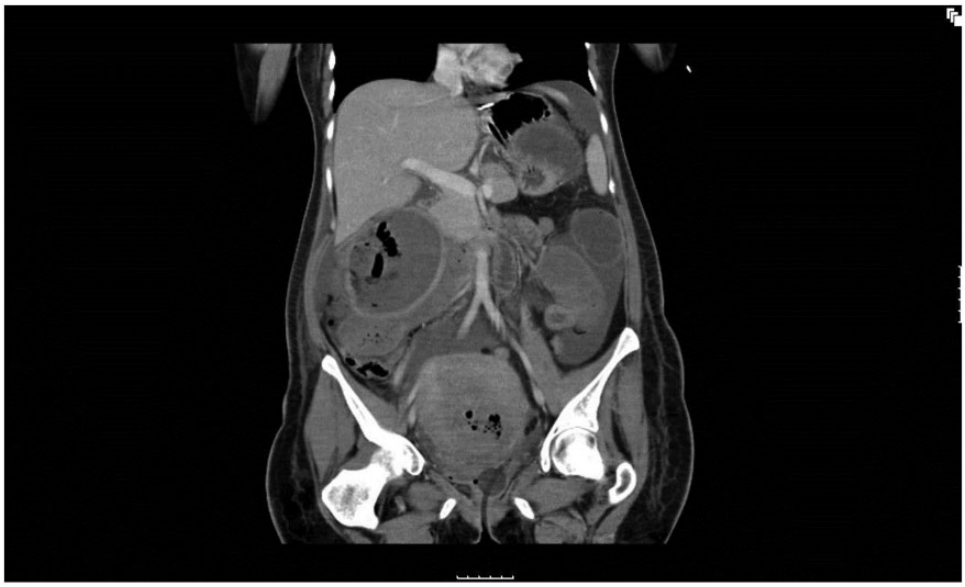
Considering the concerns regarding AFLP, the obstetric team proceeded to deliver the preterm baby by caesarean section (CS) at 34 weeks. Altered clotting necessitated a haematology opinion and fresh frozen plasma (FFP) was transfused. CS was performed without incident. A standard pfannenstiel incision was used, and features of intestinal obstruction were not noted. The infant son was transferred to Neonatal Intensive Care Unit (NICU) but has since progressed well. The symptoms and signs of obstruction persisted for two days post CS and a computerised tomogram (CT) was performed.

Abdominal CT (Figure 1) suggested small bowel obstruction possibly caused by small bowel volvulus, a rare but recognised complication of pregnancy.[2] The patient was immediately seen by the surgical team who proceeded straight to an operation.

At laparotomy, an approximately 30 cm length of small bowel was found to be necrotic secondary to a right-sided small bowel volvulus. The exact mechanism of this volvulus is not certain.

In the normal pregnant abdomen, the viscera are displaced caudally by the enlarging gravid uterus. A proposed mechanism in our case is halting of this

Figure 1. Abdominal CT showing small bowel volvulus within the right upper quadrant.



caudal progression by adhesions from the previous appendicetomy and the formation of a closed loop of small bowel in the right upper quadrant.

The 30 cm segment of necrotic small bowel was resected. Right hemicolectomy was also undertaken to remove an affected segment of large bowel. Formation of end ileostomy with mucous fistula was performed before transfer to the critical care unit. She was promptly reviewed by the nutrition team and started on total parenteral nutrition (TPN).

Following weaning from sedation, the patient complained of bilateral visual loss with inability to distinguish more than light/dark. Pupillary reflexes, cranial nerve examination and fundoscopy were normal, but startle reflex was absent.

Neurology review diagnosed cortical blindness most likely caused by cortical venous thrombosis or bilateral posterior cerebral artery infarcts. Neuroimaging was normal with no features suggestive of intracranial pathology. A diagnosis of posterior reversible encephalopathy syndrome (PRES) was proposed despite lack of the typical magnetic resonance imaging (MRI) features and without the pre-eclamptic syndrome normally associated with it.[3] Visual perception abnormalities within the context of PRES may include hemianopia, visual neglect, auras, visual hallucinations in addition to cortical blindness. The latter may be accompanied by denial of blindness (Anton's syndrome).[4]

She made a steady recovery and eyesight improved over four to five days. Given the full recovery, she has not required any neurological follow-up. The patient was discharged 25 days after her original presentation. The stoma has since been successfully reversed and both mother and son are now doing very well.

Discussion

The pregnant patient with abdominal symptoms can be an investigative and management dilemma. In this case, and in others where an exact diagnosis is not immediately clear, there perhaps remains a tendency for symptoms to be attributed to the pregnancy. The role of the emergency department remains crucial. A patient in the advanced stages of pregnancy obviously needs obstetric input and is best cared for on an obstetric ward, but surgical review should be requested at an early stage when there is any diagnostic uncertainty.

Diagnostic imaging during pregnancy remains a contentious issue. The safety and efficacy of radiological investigations vary between modalities and while this would discourage the use of CT during pregnancy, thought must be given to the consequences of not reaching a diagnosis. Non-harmful imaging including ultrasound and non-contrast MRI should be employed promptly when surgical pathology is suspected, and the mother should be included in any discussion about potentially harmful investigations.

One might also question the necessity of stoma formation in a young woman and new mother.

Whilst primary anastamosis was considered, it was decided against due to the extent of involved bowel and underlying physiology.

Extensive literature searching has not found any other cases of gestational obstruction complicated by cortical blindness. The importance of this case is not in highlighting these rare conditions but in demonstrating the importance of considering non-obstetric pathology in any pregnant patient. Mothers-to-be are often promptly admitted to obstetric wards without due diagnostic consideration.

Declarations

Competing interests: None declared

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Guarantor: SB

Contributorship: PP was involved in care of patient in question and performed literature search, wrote initial poster (presented at RSM) and wrote and revised case report; HP and TS were involved in patient care, scrutinised patient notes and produced timeline and presented poster at RSM; CTJC was involved in patient care and proofread the paper; SB was consultant in charge of patient care and reviewed and revised poster and paper.

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